

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A brush abrasion detector of a vehicle generator comprising:
a brush that is located being slidably press-fitted to a slip ring to create a contact

resistance, which is provided at an end portion of a field winding of a generator, and supplies an excitation current from a battery to said field winding;

a current detection circuit for detecting a current value flowing through said field winding of the generator via said brush, said current value corresponding to the contact resistance;

an output voltage detection circuit for detecting an output voltage value from the ~~mentioned~~ generator, said output voltage corresponding to the contact resistance; and

a brush abrasion determination circuit for determining an abrasion state of said brush based on a current value detected by said current detection circuit or an output voltage value detected by said output voltage detection circuit.

2. (original): The brush abrasion detector of a vehicle generator according to claim 1, wherein current interruption control means for interrupting and controlling a current flowing through said field winding depending on whether or not an output voltage from the generator is larger than a target value is provided; and

said brush abrasion determination circuit determines an abrasion state of said brush based on an average value of interrupted current detected by said current detection circuit.

3. (original): A brush abrasion detector of a vehicle generator comprising: a brush that is located being slidably press-fitted to a slip ring, which is provided at an end portion of a field winding of a generator, and supplies an excitation current from a battery to said field winding; a revolution speed detection circuit for detecting the number of revolutions of said generator; and a brush abrasion determination circuit determining an abrasion state of said brush based on the number of revolutions detected by said revolution speed detection circuit.

4. (original): The brush abrasion detector of a vehicle generator according to claim 1, wherein a material having a large contact resistance is implanted in said brush at a portion of the limit of abrasion.

5. (currently amended): The brush abrasion detector of a vehicle generator according to claim 2, wherein a material having a large contact resistance is implanted in said brush at ~~a portion of the~~ an abrasion limit ~~portion of abrasion~~.

6. (original): The brush abrasion detector of a vehicle generator according to claim 3, wherein a material having a large contact resistance is implanted in said brush at a portion of the limit of abrasion.

7. (currently amended): The brush abrasion detector of a vehicle generator according to claim 1, wherein said brush comprises a brush abrasion limit portion which possesses such a configuration that a contact area with the slip ring becomes smaller.

8. (currently amended): The brush abrasion detector of a vehicle generator according to claim 2, wherein said brush comprises a brush abrasion limit portion which possesses such a configuration that a contact area with the slip ring becomes smaller.

9. (currently amended): The brush abrasion detector of a vehicle generator according to claim 3, wherein said brush comprises a brush abrasion limit portion which possesses such a configuration that a contact area with the slip ring becomes smaller.

10. (new): A brush abrasion detector of a vehicle generator comprising:
a brush that is located being slidably press-fitted to a slip ring, which is provided at an end portion of a field winding of a generator, and supplies an excitation current from a battery to said field winding;

a current detection circuit for detecting a current value flowing through said field winding of the generator via said brush;

an output voltage detection circuit for detecting an output voltage value from the generator;

a brush abrasion determination circuit for determining an abrasion state of said brush based on a current value detected by said current detection circuit or an output voltage value detected by said output voltage detection circuit,

wherein current interruption control means for interrupting and controlling a current flowing through said field winding depending on whether or not an output voltage from the generator is larger than a target value is provided, and

said brush abrasion determination circuit determines an abrasion state of said brush based on an average value of interrupted current detected by said current detection circuit.

11. (new): The brush abrasion detector of a vehicle generator according to claim 10, wherein a material having a large contact resistance is implanted in said brush at an abrasion limit portion.

12. (new): The brush abrasion detector of a vehicle generator according to claim 10, wherein said brush comprises a brush abrasion limit portion which possesses such a configuration that a contact area with the slip ring becomes smaller.